

Abstract of the Invention

A digital data system employs multiple error protection mechanisms on messages that pass along a link interconnect fabric from one node or device to another node or device. The nodes may be end points (such as processor or storage units), or may be intermediate devices or branch points (such as routers or switches in the interconnect fabric). The interconnect fabric comprises a set of one or more routers, switches, electrical, optical, electroptical or other links along which messages are passed. Messages are packets having a defined format including, e.g., a header portion, typically with source and target addresses, and codes indicating message-type or other information, followed by one or more data or other fields.

A first node ("sending" node) of a digital data system as described sends a data transmission comprising one or more message packets to a second node ("receiving" node) over a link of a fabric as described above. The receiving node returns a control symbol to the sending node for each packet received on the link. The sender uses information in that symbol to control the further transmission of message packets to receiver over the link.

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